

MAR 12 2007

Application No. 09/869,638  
Filed: February 8, 2002  
TC Art Unit: 2624  
Confirmation No.: 5891

REMARKS

Claim 1 has been amended to incorporate the subject matter of claims 3 and 4, which have been canceled herein without prejudice or disclaimer. Claim 14 has also been canceled herein without prejudice or disclaimer, as redundant in light of the amendment of claim 1. The dependency of claims 5 and 15 has been amended as a result of the cancellation of the previous base claims. Claim 13 has been amended to better conform with U.S. practice. Support for the amendments is found in the specification and original claims, including page 6, lines 29-31. Upon entry of the present amendment, claims 1, 2, 5-9, 11, 13, and 15 will be pending.

Applicants acknowledge with appreciation that the previous rejections for indefiniteness have been withdrawn. The rejections for obviousness of claims 1-9, 11, and 13-15 over Luck et al. in view of Watanabe and separately in combination with Hemstreet, have been maintained. These rejections are respectfully traversed for the reasons given below, and reconsideration is requested.

Rejections under 35 U.S.C. § 103(a) for obviousness

Claims 1-3, 6-9, 11 and 14 are rejected as allegedly obvious over Luck in view of Watanabe. Without conceding the correctness of the Examiner's observations, it is respectfully submitted that the previous basis for rejection does not apply to claim 1 as amended.

First, claim 1 as amended makes it abundantly clear that in the claimed method at least two microscope images are taken of the same sample, which prior to taking the microscope images has been marked with different chemical markers for each image. This is described in the specification in the specification at page 4,

-6-

WEINGARTEN, SCHURGIN,  
GAGNESIN & LEBOVICI LLP  
TEL. (617) 542-2290  
FAX. (617) 451-0313

BEST AVAILABLE COPY

Application No. 09/869,638  
Filed: February 8, 2002  
TC Art Unit: 2624  
Confirmation No.: 5891

last paragraph and page 5, first paragraph, where the method of claim 1 is described. The passage states *inter alia* that during the process of marking, image generation and bleaching with several markers, the positions of the biological objects (e.g., lymphocytes) will remain unchanged, which allows a matching and coincidence comparison, respectively, of the positions in the different images. Luck neither teaches nor fairly suggests taking two or more images of a sample containing biological objects, wherein the biological objects are marked with different chemical markers before the individual microscope images are taken.

According to the Examiner, Luck at column 4, lines 13-19 teaches taking at least two microscope images of a sample including a plurality of biological objects. Luck states that "the camera 20 takes electronic images of these areas and sends the images to the processing system 22." However, it is apparent that the images meant by Luck are images of different areas, i.e. different biological objects in the same field, in contrast to the method of the present invention, wherein at least two microscope images are taken from the same sample (i.e., the same field). Luck does also not teach or fairly suggest labeling the biological objects to be determined with different chemical markers for each image, in the sense of the method recited in claim 1 as amended. Luck at column 8, lines 33-35 merely teaches using the Papanicolaou stain to dye the nuclei of biological cells, which is a well-known multi-chromatic stain used on cytologic specimens to provide the level of transparency and detail important in cancer screening. However, this type of "chemical marker" is a single permanent dye, and does not suggest using a plurality of different chemical markers to label the same biological objects with

-7-

WEINGARTEN, SCHURGIN,  
GAGNEBIN & LEBOVICI LLP  
TEL. (617) 542-2290  
FAX. (617) 451-0313

BEST AVAILABLE COPY

Application No. 09/869,638  
Filed: February 8, 2002  
TC Art Unit: 2624  
Confirmation No.: 5891

different markers in each image. Thus, Luck fails to teach or suggest the presently claimed method.

Claims 4, 5, 13, and 15 are rejected as allegedly obvious over Luck, as modified by Watanabe and as applied to claim 3, further in view of Hemstreet. According to the Office Action, Luke does not teach marking biological objects with flurochrome or preparing for such marking. Hemstreet allegedly teaches that slides should be rinsed prior to staining with a fluorochrome.

While Hemstreet might teach creating a fluorescent image, Hemstreet does not teach or fairly suggest marking a biological object with different chemical markers and taking two or more microscope images, wherein a bleaching or rinsing step is performed between taking the individual microscope images. Instead, Hemstreet, in particular at column 28, lines 27-32, as referenced in the Office Action, merely teaches how to prepare a poly-L-lysine-coated slide, on which a sample is mounted. Otherwise, Hemstreet teaches using the grey level of one quantative fluorescent image of cells which may be stained with one or more markers at the same time. The Hemstreet examples teach the use of three markers simultaneously. There is no teaching in Hemstreet whatsoever of taking two or more microscope images, wherein biological objects are stained with different chemical markers and a bleaching or rinsing procedure is performed between taking the individual images.

Applicant holds the view that even if, *arguendo*, a person skilled in the art had modified the teaching of Luck according to Watanabe and combined it with the teaching of Hemstreet, the references, either alone or in combination, would not have

Application No. 09/869,638

Filed: February 8, 2002

TC Art Unit: 2624

Confirmation No.: 5891

rendered obvious the presently claimed method of automatic analysis, which requires the use of different chemical markers for each image and a bleaching or rinsing step in between.

Thus, none of the references cited, either alone or in combination, teaches or suggests obtaining two or more microscope images of biological objects with the use of different chemical markers for each image and rinsing or bleaching between applying such markers. Because not every claim limitation is taught or suggested by the references cited, the references do not support a *prima facie* case of obviousness for the present claims.

The Examiner is encouraged to telephone the undersigned attorney to discuss any matter that would expedite allowance of the present application.

Respectfully submitted,

TIM WILHELM NATTKEMPER ET AL.

By:

Holliday C. Heine  
Holliday C. Heine, Ph.D.  
Registration No. 34,346  
Attorney for Applicant(s)

WEINGARTEN, SCHURGIN,  
GAGNEBIN & LEOVICI LLP  
Ten Post Office Square  
Boston, MA 02109  
Telephone: (617) 542-2290  
Telecopier: (617) 451-0313

HCH/LJH/mrb 349226.1

-9-

WEINGARTEN, SCHURGIN,  
GAGNEBIN & LEOVICI LLP  
TEL. (617) 542-2290  
FAX. (617) 451-0313

BEST AVAILABLE COPY